APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I., kand. med. nauk; KARNAZIN, V.P., kand. med. nauk

Talc pneumoconiosis in workers of the dusty departments of the "Kauchuk" Plant. Trudy 1-go MMI 28:107-113 '64.

(MIRA 17:11)

1. Kafedra obshchey terapii i professional'nykh zabolevaniy (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye.M. Tareyev) i kafedra rentgenologii i radiologii (zav. - prof. L.D. Lindenbraten) 1-go Moskovskogo ordena Lenina imeni Sechenova.

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MAKARENKO, I.I., kand. med. nauk

Silicosis complicated by arthritis. Trudy 1-go MMI 28:24-42 '64.

Case of combined silicosis and scleroderma. Ibid.:43-48
(MIRA 17:11)

1. Kafedra obshchey terapii i professional'nykh zabolevaniy (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye.M. Tareyev) sanitarno-gigiyenicheskogo fakul'teta 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I.

Pathogenesis of amyloidosis in rheumatoid arthritis. Terap. arkh. 35 no.9:86-92 S'63 (MIRA 17:4)

1. Iz kafedry obshchey terapii i professional'nykh zabolevaniy (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye.M. Tareyev) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

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MACARENKO, L.I., kand. med. nauk

[illegible] genosis.
Sov. med. [illegible]

1. [illegible]

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I., kand.med.nauk

Some nonspecific syndromes in silicosis. Sov.med. 26 no.2: 35-41 F'63. (MIRA 16:6)

1. Iz kafedry obshchey terapii i professional'nykh zabolevaniy (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye.M.Tareyev) sanitarno - gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(LUNGS--DUST DISEASES) (COLLAGEN DISEASES)
(KIDNEYS--DISEASES)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

ANDROSOVA, S.O.; APROSINA, Z.G.; BEZRODNYKH, A.A.; VERMEL', A.Ye.; VINOGRADOVA, O.M.; LEVITSKIY, E.R.; MAKARENKO, I.I.; MAKSHANOV, D.A.; POLYANTSEVA, L.R.; SUMAROKOV, A.V.; SHATALOV, N.N.; SHAPIRO, L.A.; TAREYEV, Ye.M., prof., red.; MEL'NIKOV, Ye.B., red.

[Occupational diseases] Professional'nye bolezni; uchebnoe posobie dlia studentov sanitarno-gigienicheskikh fakul'tetov. Pod red. E.M.Tareeva. Moskva, 1963 p. 223 p. (MIRA 16:6)

1. Moscow. Pervyy meditsinskiy institut. 2. AMN SSSR (for Tareyev).

(OCCUPATIONAL DISEASES)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I.; BURKOVA, N.G.

Hemagglutination reaction in patients with the so-called unspecific infectious arthritis. Sov. med. 20 no.1:57-60 Ja '56. (MLRA 9:5)

1. Iz obshchey i gospital'noy terapevticheskoi kliniki (zav.-deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR. prof. E.M. Tareyev) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta.

(AGGLUTINATION
reactions in unspecific infect. arthritis)
(ARTHRITIS
unspecific infect., hemagglutination reactions in )

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I. I.

Makarenko, I. I.

"Injuries to the internal organs in so-called nonspecific infectious (rheumatoid) arthritis." First Moscow Order of Lenin Medical Inst imeni I. M. Sechenov. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', No. 25, 1956

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I.

SURA, V.V., kandidat meditsinskikh nauk; MAKARENKO, I.I.

Involvement of the kidneys in so-called nonspecific infections (rheumatoid) arthritis. Sov.med. 19 no.12:46-50 D '55. (MLRA 10:9)

1. Iz obshchey i gospital'noy terapevticheskoy kliniki (zav. - deystvitel'nyy chlen AMN SSSR prof. Ye.M.Tareyev) Sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta
(KIDNEYS--DISEASES) (ARTHRITIS, RHEUMATOID)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I.

Treatment of so-called nonspecific infectious arthritis (rheumatoid arthiritis) with butadione. Sov.med.19 no.7:44-48 Jl '55.

I. Iz kafedry obshchey i gospital'noy terapii (zav.-deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR prof. E. M. Tareyev, sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta.

(ANALGESICS, ther. use
butadione in rheum.arthritis)
(ARTHRITIS, RHEUMATOID, ther.
butadione)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.I.

Certain clinical variations in the course of so-called non-specific infectious arthritis. Sov. med. 18 no.10:20-24 O '54. (MLRA 7:11)

1. Iz gospital'noy i propedevticheskoy kliniki (zav. deystvitel'nyy chlen AMN SSSR prof. Ye.M.Tareyev) sanitarno-gigiyenicheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo instituta.
(ARTHRITIS, RHEUMATOID,
clin. aspects)

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"Cytochemical [illegible]"

[illegible] Conditions for [illegible] -induced [illegible] of [illegible], [illegible] and infectionists, 1[illegible].

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

POKROVSKAYA, M.P.; MAKARENKO, I.G.; KRASKINA, N.A.; BRAUDE, N.I.; PRYADKINA, M.D.; GUTOROVA, N.M.

Significance of cytochemical investigations in the study of immunological problems. Zhur.mikrobiol.epid. i imun. 30 no.1: 5-11 Ja '58. (MIRA 12:3)

1. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha.
(IMMUNITY,
cytochem. aspects (Rus))

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I. G.

"The Cytology and Histochemistry of the Uterus During Pregnancy." Cand Biol Sci, Moscow Order of Lenin State U imeni M. V. Lomonosov, 10 Dec 54. (VM, 1 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.A.

Luminescence microscopy as a method for the early diagnosis of malignant tumors of the female genialia. Zdrav.Bel. no.3:12-15 '62. (MIRA 15:5)

1. Iz kafedry akusherstva i ginekologii (zaveduyushchiy kafedroy - professor I.M. Starovoytov) Minskogo meditsinskogo instituta.
(GENERATIVE ORGANS, FEMALE--CANCER)
(FLUORESCENCE MICROSCOPY)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I. A.

MAKARENKO, I. A. -- "An Evaluation of the Effectiveness of Local Anesthesia in Gynecological Operations Using the Method of Plethysmography and Pneumography." Minsk, 1955. (Dissertation for the Degree of Candidate in Medical Sciences).

So: Knizhnaya letopis', No 8, 1956, pp 97-103

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, I.A.

Evaluation of the efficacy of local anesthesia in gynecological operations by means of plethysmography and of pneumography. Akush.i gin. no.2:8-12 Mr-Ap '54. (MLRA 7:6)

1. Iz akusherско-ginekologicheskoy kliniki (direktor - professor L.S.Persianinov) Minskogo meditsinskogo instituta.
(Generative organs, Female--Surgery) (Local anesthesia)

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KUZ'MIN, Ye., kand.tekhn.nauk; MAKARENKO, I., nauchnyy sotrudnik; PERVAKOV, A., nauchnyy sotrudnik; TATARINOV, V., nauchnyy sotrudnik

New developments in the design of a joint for series 1-464 houses. Na stroi.Ros. 4 no.6:29-30 Je '63. (MIRA 16:6)

1. Odesskiy inzhenerno-stroitel'nyy institut (for all except Kuz'min).

(Building--Details)

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ACCESSION NR: AT4035158

melting point, electrical resistivity, chemical stability and microhardness, all of which increased with the C/metal ratio. X-ray analysis of the nitrides showed a cubic lattice of the NaCl type with a period of about 4.5-5.5 A. "The X-ray analyses were carried out by O. T. Khorpyakov." Orig. art. has: 12 figures and 6 tables.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii AN SSSR (Institute of Geochemistry and Analytical Chemistry, AN SSSR)

SUBMITTED: 31Oct63 DATE ACQ: 30Apr64 ENCL: 00

SUB CODE: IC NO REF SOV: 016 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

ACCESSION NR: AT4035158 S/0000/63/000/000/0008/0021

AUTHOR: Samsonov, G. V.; Kosolapova, T. Ya.; Lyutaya, M. D.; Makarenko, G. N.

TITLE: Preparation and physicochemical properties of the carbides and nitrides of the rare-earth elements

SOURCE: AN SSSR. Institut geokhimii i analiticheskoy khimii. Redkozemel'nyye elementy* (Rare-earth elements). Moscow, Izd-vo AN SSSR, 1963, 8-21

TOPIC TAGS: rare earth, rare earth element, scandium, lanthanum, yttrium, cerium, carbide, nitride

ABSTRACT: After reviewing the literature on the structure and physical properties (density, melting point, electrical resistivity) of the carbides and nitrides of Sc, Y, La and Ce, the authors describe the preparation of ScC, YC, LaC, ScN, CeN and LaN, the oxidation of the carbides, and some results of an X-ray study of their microstructure. The carbides and nitrides were prepared by heating the oxides with C and N, respectively, at temperatures between 800 and 1800C. The nitrides could also be prepared at lower temperatures by heating the oxide with ammonia. Data are given on the effects of variations in temperature, heating rate and concentration of the reagents, as well as on the relationship between the composition and physical properties of the carbides. Thus, $YC_2$ was found to have the highest

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ACC NR: AP7008531

$TuC_2$; the coefficient of emf from -5.95 μv/°C for $ErC_2$ to -7.75 μ v/°C for $TbC_2$; Hall effect from -2.55 $cm^3$/coul for $TbC_2$ to +136 $cm^3$/coul for $TuC_2$; effective carrier concentration from 0.018 el/atom M for $TuC_2$ to 1.04 el/atom M for $TbC_2$; and mobility from 6.75 $cm^2$/v. sec for $ErC_2$ to 19.6 $cm^2$/ v. sec for $TuC_2$. Melting points ranged from 2180°C for $TuC_2$ to 2280°C for $ErC_2$. Orig. art. has: 1 figure and 2 tables. [TD]

SUB CODE: 11/ SUBM DATE: 13Jan66/ ORIG REF: 009/ OTH REF: 008

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

ACC NR: AP7008531 SOURCE CODE: UR/0363/67/003/002/0395/0397

AUTHOR: Paderno, Yu. B.; Yupko, V. L.; Rud', B. M.; Kvas, O. F.; Makarenko, G. N.

ORG: Institute of Material Science Problems, AN UkrSSR (Institute problem materialovedeniye AN UkrSSR)

TITLE: Electrophysical properties of Gd, Tb, Dy, Er, Tu dicarbides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 3, no. 2, 1967, 395-397

TOPIC TAGS: gadolinium ~~dicarbide~~, terbium ~~dicarbide~~, dysprosium ~~dicarbide~~, erbium ~~dicarbide~~, thulium ~~dicarbide~~, dicarbide ~~[illegible]~~, carbide, resistivity, Hall effect, carrier density

ABSTRACT: The results are presented of an experimental determination of the electrophysical properties of Gd, Tb, Dy, Er, and Tu dicarbides. Initial powder carbides were obtained by the reduction of metal oxides with carbon in vacuum at 1800°C for 25-60 min. The carbide powders were compacted and sintered in argon at 1700—1800°C for 15 min under a pressure of 100 kg/cm$^2$; the porosity of sintered compacts was 5—13%; finished specimens were annealed at 1650°C for 8 hr. It was found that carbide resistivity changed from 30 μohm.c. for $GdC_2$ to 515 μohm.cm for

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

ACC NR: AP7000013

SUB CODE: 07/ SUBM DATE: 16Nov64/ ORIG REF: 001/ OTH REF: 003

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

ACC NR: AP7000013 (A) SOURCE CODE: UR/0080/66/0[illegible]/011/2395/2400

AUTHOR: Makarenko, G. N.; Kripyakevich, P. I.; Kuz'ma, Yu. B.; Kosolapova, T. Ya.

ORG: Institute of Materials Science Problems, AN UkrSSR (Institut problem materialovedeniya AN UkrSSR); L'vov State University imeni I. Franko (L'vovskiy gosudarstvennyy universitet)

TITLE: Preparation of rare earth sesquicarbides

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 11, 1966, 2395-2400

TOPIC TAGS: lanthanum compound, cerium compound, praseodymium compound, neodymium compound, carbide

ABSTRACT: A study of the possibility and conditions of preparation of lanthanum, cerium, praseodymium and neodymium sesquicarbides via reduction of the metal oxides with carbon in a vacuum and in argon and reaction of the dicarbides with the corresponding oxides showed that the preparation of sesquicarbides is impossible under these conditions because their formation is superseded by the formation of the stabler dicarbides. It is shown that the four sesquicarbides can be formed by reacting dicarbides with the corresponding metals in argon, and also by arc melting of metal fragments with spectroscopically pure graphite. The existence of isostructural oxycarbides of lanthanum and praseodymium of the approximate composition LaCO and PrCO is postulated. Orig. art. has: 9 tables.

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L 32053-66

ACC NR: AP6013341

structure of the rare earth atoms and the magnetic susceptibility of the dicarbides. The low effective carrier concentration in the case of $YC_2$ is due to a change in bond character in the $C_2$ complex, this being supported by data on the hydrolysis of $YC_2$. Orig. art. has: 1 figure and 2 tables.

SUB CODE: 11 / SUBM DATE: 28May65 / ORIG REF: 012 / OTH REF: 008

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

L 32053-66 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/JG/AT/WH

ACC NR: AP6013341 (A) SOURCE CODE: UR/0363/66/002/004/0626/0629

AUTHOR: Paderno, Yu. B.; Yupko, V. L.; Rud', B. M.; Makarenko, G. N.

ORG: Institute of Materials Science Problems, Academy of Sciences UkrSSR (Institut problem materialovedeniya Akademii nauk Ukr SSR)

TITLE: Physical properties of certain rare earth dicarbides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiy materialy, v. 2, no. 4, 1966, 626-629

TOPIC TAGS: rare earth metal, carbide, electric property, Hall constant, thermoelectromotive force

ABSTRACT: The temperature dependence of the electrical resistance in the 20 – 1300C temperature range, the coefficient of absolute thermoemf, the Hall coefficient at room temperature, and the melting point were measured on the same samples of Y, La, Ce, Pr, and Nd dicarbides. From these measurements, the charge carrier concentrations and mobilities were calculated. An anomalous temperature dependence of the electrical resistance was observed around 1000C. The high effective carrier concentration in $CeC_2$ as compared to the other dicarbides studied is explained on the basis of the electronic

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L 4988-66

ACC NR: AP5025901

minutes. The measurements of the work function taken during the activation process showed a minimum of 2.49 ev at 1380K, which value remained unchanged until 1520K, when an insignificant increase could be observed. At any given fixed temperature, the stationary value of the work function was attained rapidly when the cathode temperature was high. The good emission properties of $CeC_2$ are indicated by its fast activation, with the work function changing from 3.20 to 2.49 ev in the temperature range of 1220—1380K. The maximum current density actually measured was 3 amp/cm$^2$ at a cathode temperature of 1700K, but a rough extrapolation leads to a value of 17 amp/cm$^2$ at 2300K. The authors hope that studies of other rare-earth metal carbides may help to explain the influence of the electronic structure on the emission properties of materials. Orig. art. has: 2 figures.

SUB CODE: EM,/C/ SUBM DATE: 05Feb65/ ORIG REF: 004/ OTH REF: 004 [ZL]

ATD PRESS: 4131

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Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

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L 4988-66 EWT(1)/EWP(e)/EWT(m)/EWP(i)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2/T/EWP(t)/EWP(b)

ACC NR: AP5025901 IJP(c) JD/ SOURCE CODE: UR/0057/65/035/010/1860/1862
JG/AT/WH

AUTHOR: Paderno, Yu. B.; Fomenko, V. S.; Podchernyayeva, I. A.; Makarenko, G. N.

ORG: Institute for the Study of Problems of Material Sciences, AN SSSR, Kiev (Institut problem materialovedeniya AN SSSR)

TITLE: Thermionic emission from $CeC_2$

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 10, 1965, 1860-1862

TOPIC TAGS: thermionic emission, rare earth metal, cerium carbide, carbide, cathode, cerium bicarbide

ABSTRACT: The thermal emission properties of $CeC_2$, whose electronic structure resembles that of $ThC_2$ (which is known to be a good emitter) have been investigated in the temperature range of 1200—1770K, in view of the possible use of the material for the production of efficient cathodes. The methods and instrumental setup used for the experiments were described in an earlier work (Samsonov, G. V., V. S. Fomenko, V. N. Paderno, and B. M. Rud', Teplofizika vysokikh temperatur, 2, 730, 1964). Suspended in absolute alcohol, the carbide was deposited onto a tantalum substrate upon which it formed a 0.2—0.3-mm-thick layer. To prevent oxidation, the deposition did not last more than three

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L 7929-66

ACC NR: AP5027935

dicarbides were measured and plotted against the elements and temperature. A structural model is proposed for $LaC_2$, $PrC_2$, $NdC_2$, and $CeC_2$: in a tetragonal face-centered cell containing four metal atoms and four $C_2$ groups, ten of the twelve valence electrons of the four metal atoms participate in the C-C bond, and the remaining two (0.5 electron per metal atom) are free and participate in the conduction. It is concluded that the covalent bond is the strongest one in rare earth dicarbides, and that it is combined with an ionic-metallic bond. Orig. art. has: 2 figures and 2 tables.

SUB CODE: IC, GC / SUBM DATE: 05Jul65 / ORIG REF: 007 / OTH REF: 006

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

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L 7929-66 EWP(e)/EWT(m)/EWP(i)/ETC/EWG(m)/EWP(t)/EWP(b) IJP(c) JD/JG/AT/WH

ACC NR: AP5027935 SOURCE CODE: UR/0363/65/001/010/1787/1790

AUTHOR: Makarenko, G. N.; Pustovoyt, L. T.; Yupko, V. L.; Rud', B. M.

ORG: Institute of Materials Science Problems, Academy of Sciences, UkrSSR, Kiev (Institut problem materialovedeniya Adademii nauk UkrSSR)

TITLE: Nature of chemical bonding in rare earth dicarbides

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 10, 1965, 1787-1790

TOPIC TAGS: yttrium compound, lanthanum compound, cerium compound, praseodymium compound, neodymium compound, gadolinium compound, chemical bonding

ABSTRACT: In order to study the chemical bonding in rare earth carbides, the composition of gaseous hydrolysis products of yttrium, lanthanum, cerium, praseodymium, neodymium, and gadolinium dicarbides is investigated chromatographically. The evolution of acetylene as the main hydrolysis product indicates that in the dicarbides the carbon-carbon bonds are much stronger than the carbon-metal bonds, which are broken during hydrolysis. The amount of acetylene increases from La to Ge and then to Pr and Nd; this is explained in terms of the electronic structure of the rare earths. Physical properties (melting points, Hall effect, electrical resistivity, thermoemf, and thermal expansion coefficient) of the

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

L 31875-66
ACC NR: AT6013563

microhardness. The carbide solid solutions were prepared by reduction of the suitable oxide mixtures by carbon. It was found that the optimum conditions for preparing a solid solution containing 20 mole% ScC and having maximum microhardness are obtained by heating a stoichiometric mixture of oxides with carbon at 1900°C for 1 hr. In the case of reduction in vacuo, the optimum conditions of formation of WC+TiC+ScC solid solutions are: heating of a suitable oxide and carbon mixtures for 1 hr at 2000°C or in the case of carbidization in a Tamman furnace, a two-time heating of a $WC+TiO_2+Sc_2O_3+C$ mixture for 1 hr at 2100°C or heating of a $W+Sc_2O_3+TiO_2+C$ mixture for 1 hr at 2500°C. In general, the mere presence of scandium carbide increases the hardness of the other transition element carbides. Orig. art. has: 1 figure and 4 tables.

SUB CODE: 07,11/ SUBM DATE: 03Jul65/ ORIG REF: 002/ OTH REF: 000

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

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L 31875-66 EWT(m)/ETC(f)/EWP(e)/EWP(w)/ETI/EWP(t)/T IJP(c) AT/WH/GD/JG/JD
ACC NR: AT6013563 SOURCE CODE: UR/0000/65/000/000/0250/0256

53
52
B+1

AUTHOR: Samsonov, G. V.; Makarenko, G. N.; Krushinskiy, A. N.

ORG: Institute of Material Science Problems, AN UkrSSR (Institut problem materialovedeniya AN SSSR); Kiev Order of Lenin Polytechnic Institute (Kiyevskiy ordena Lenina politekhnicheskiy institut)

TITLE: Investigation of the condition of formation of solid solutions of carbides involving scandium carbide

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Vysokotemperaturnyye neorganicheskiye soyedineniya (High temperature inorganic compounds). Kiev, Naukova dumka, 1965, 250-256

TOPIC TAGS: solid solution, carbide, scandium, scandium compound, nonferrous metal, tungsten, titanium, carbon alloy

ABSTRACT: The conditions of formation of the WC+ScC solid solutions in the WC to ScC mole ratio from 1:4 to 4:1 were investigated in vacuo in the 1000-2000°C range. The formation of WC+TiC+ScC solid solutions was investigated in vacuo and in hydrogen in the 1000-2500°C range. The solid solution products were examined for

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L 25630-65
ACCESSION NR: AP4044546

were not formed as intermediate reaction products; they consisted of mixtures of the dicarbides with the higher metal oxides. The density, fusion temperature, electric resistance and thermal e.m.f. of $YC_2$, $LaC_2$, $CeC_2$ and $PrC_2$ were determined. Atmospheric oxidation of the dicarbides resulted in their partial oxidation and partial reaction with atmospheric moisture. Orig. art. has: 2 tables and 4 figures.

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov AN UkrSSR (Institute of Metalloceramics and Special Alloys, AN UkrSSR)

SUBMITTED: 01Jul63 ENCL: 00 SUB CODE: IC, GC

NR REF SOV: 003 OTHER: 008

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L 25630-65 EPF(n)-2/EPR/EWT(m)/EWP(b)/EWP(e)/EWP(t) Pe-4/Pu-4 IJP(c) 36
AT/WH/JD/JG
ACCESSION NR: AP4044646 S/0073/64/030/008/0784/0787 28
B

AUTHOR: Kosolepova, T. Ya.; Makarenko, G. N.

TITLE: The preparation and properties of yttrium, lanthanum, cerium and praseodymium dicarbides

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 8, 1964, 784-787

TOPIC TAGS: yttrium dicarbide, lanthanum dicarbide, cerium dicarbide, praseodymium dicarbide, synthesis, property, density, fusion temperature, electric resistance, thermal e.m.f.

ABSTRACT: The possibility of preparing Sc, Y, La, Ce and Pr dicarbides by reducing the corresponding metal oxides with carbon in vacuum was investigated. No $ScC_2$ was formed in the Sc-C system; only ScC. The optimum conditions for preparing the Y, La, Ce and Pr dicarbides included heating briquets of stoichiometric mixtures ($CeO_2$ + 4C, and the rest, $Me_2O_3$ + 7C) in vacuum at 1800-1900C. Manometric studies and chemical and x-ray analyses showed that lower oxides

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L 12117-65

ACCESSION NR: AT4047132

hardness, melting point, thermal expansion coefficient, resistivity, thermal emf and emissivity of these compounds are tabulated. After discussion of the resistivity of the carbides in terms of the C/Y ratio, this is related to the electronic shell structure. The formation of ScC (commencing at 1300-1400C) is discussed in somewhat less detail, and after listing the physical properties of a sintered specimen there is a brief note on lanthanum dicarbide. Orig. art. has: 2 tables, 6 figures and 5 chemical equations.

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute for Problems in Materials Science, AN UkrSSR)

SUBMITTED: 03Jun64 ENCL: 00 SUB CODE: IC, MT

NO REF SOV: 006 OTHER: 009

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

L 12417-65 EWT(m)/EPF(n)-2/EWP(e)/EPR/EWP(b) Pa-4/Pu-4 JD/JG/MLK/AT/WH

ACCESSION NR: AT4047132 S/0000/64/000/000/0094/0103

AUTHOR: Kosolapova, T. Ya.; Makarenko, G. N. B

TITLE: Preparation of yttrium, scandium and lanthanum carbides and some of their properties

SOURCE: AN UkrSSR. Institut problem materialovedeniya. Redkiye i redkozemel'nyye elementy* v tekhnike (Rare and rare earth elements in engineering). Kiev, Naukova dumka, 1964, 94-103

TOPIC TAGS: yttrium carbide, scandium carbide, lanthanum carbide, carbide structure

ABSTRACT: This is a continuation of previous work by the authors who first established the existence of YC. The crystalline structures of the various yttrium, scandium and lanthanum carbides are given as far as is known, and the rest of the paper is devoted to the physical chemistry of these compounds. The carbides were obtained by reaction of the metal with carbon in vacuo, and the effects of temperature, heating time, etc. on carbide formation and completeness of the reaction were studied. Physical properties were obtained for compact samples prepared by sintering. The figures illustrate that YC was formed at 1800-1900C, $Y_2C_3$ at 1700-1800C and $YC_2$ at 1900C. Formation of oxycarbide is also discussed, and the micro-

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MAKARENKO, G.N.

Preparation of lanthanum dicarbide by a vaccum-thermal method.
Zhur. prikl. khim. 36 no.8:1860-1862 Ag '63. (MIRA 16:11)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6



especially titanium. There are 4 figures and 1 table. The two English-language references are: (see body of the abstract); W. Hume-Rothery, Phil. Mag., 44, 1154 (1953).

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov Akademii nauk USSR (Institute of Powder Metallurgy and Special Alloys of the Academy of Sciences UkrSSR)

PRESENTED: January 30, 1962, by A. P. Vinogradov, Academician

SUBMITTED: January 30, 1962

Table 1: Properties of ScC - TiC alloys.
Legend: (1) Composition, mole%; (2) pycnometric density, $g/cm^3$; (3) microhardness, $kgf/mm^2$; (4) TiC-base phase; (5) ScC-base phase; (6) specific resistivity, μ ohm·cm; (7) thermal expansion coefficient $\alpha \cdot 10^{-6}$ $degree^{-1}$.



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metallic scandium. The carbide phase obtained has a cubic face-centered NaCl-type lattice with a = 4.53. This cubic scandium carbide phase has a tendency to absorb oxygen with formation of oxycarbides, to dissolve carbon, and to undergo similar effects due to the extraordinarily high unsaturation of the d-shell in the scandium atom. This is confirmed by the high microhardness of the solid solutions of scandium carbide and isomorphous titanium carbide (Table 1) obtained by the reduction of $Sc_2O_3$ + $TiO_2$ mixtures with carbon in vacuo. The optimum composition of the solid solutions of these two carbides corresponds to a particular electron density distribution in the lattice of the solid solutions and to a particular degree of overlapping of the 3d-level of titanium and scandium. The decrease in the specific conductivity of ScC-TiC solid solutions with increasing TiC content also suggests overlapping of the d-level during the formation of solid solutions. The thermal expansion coefficient of ScC($11.4 \cdot 10^{-6}$) decreases considerably when 20 mole% TiC is dissolved. However, if the TiC content is further increased, the thermal expansion coefficient remains practically constant and very close to that of TiC. The results obtained openup new possibilities for using scandium carbide to improve the hardness of the carbides of other transition metals,



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21.2500
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AUTHORS: Samsonov, G. V., Makarenko, G. N., and Kosolapova, T. Ya.

TITLE: Scandium carbide and composite carbides of scandium and titanium

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 5, 1962, 1062-1065

TEXT: Scandium carbide phases were produced by reducing scandium oxide with carbon at high temperatures. In contrast to the published methods (R. Vickery, R. Sedlaček, A Ruben, J. Chem. Soc., 159, 503 (1959); H. Auer-Welsbach, H. Nowotny, Monatshefte f. Chemie, 92, 198 (1961)) the layers were heated in vacuo with the gaseous products being pumped off continuously. Carbide formation sets in at 1300-1400°C. In the reduction products, the bound carbon content, increases as the temperature rises without, however, reaching the calculated ScC value until 1900°C. At 1900-2000°C, the reaction mass dissolves completely, and Sc + $C_{total} \approx 100\%$. The bound C content is somewhat higher than that of pure ScC. Not even a change in conditions (temperature, heating time) yielded <ScC of the theoretical composition. Under certain conditions, ScC was formed via

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

Synthesis and physicochemical ... S/078/62/007/005/005/014
B101/B110

R. Siddacek, A. Ruben, J. Chem. Soc., 159, 498 (1959).

ASSOCIATION: Institut metallokeramiki i spetsial'nykh splavov Akademii nauk USSR (Institute of Powder Metallurgy and Special Alloys of the Academy of Sciences UkrSSR)

SUBMITTED: June 12, 1961

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1650°C, 100 kg/cm$^2$; $YC_2$ at 2000°C, 100 kg/cm$^2$). The authors determined: (1) Microhardness (kg/mm$^2$); (2) melting point, °C; (3) thermal expansion coefficient, deg$^{-1}$; (4) resistivity, μohm·cm; (5) thermo-emf, paired with electrolytic copper, μv/deg; (6) radiation coefficient ($\lambda$ = 0.655 mμ) at 1100°C; (7) ditto at 1800°C. The values in the given order are for YC: 120 ± 33; 1950 ± 20; $1.36 \cdot 10^{-6}$; $4.54 \cdot 10^4$; -34.6; 0.81; 0.81; for $Y_2C_3$: 900 ± 160; 1800 ± 50; -; $3.50 \cdot 10^2$; -6.4; 0.78; 0.91; for $YC_2$: 700 ± 106; 2300 ± 50; -; 88.7; -0.8; 0.87; 0.73. The radiation coefficient changes linearly in the given temperature range. The carbides are not stable at room temperature. Oxidation occurs, with YC and $Y_2C_3$ by formation of oxycarbides (increase in weight). $YC_2$ oxidizes more slowly and with decrease in weight. Yttrium carbides decompose easily in water and dilute alkalis or acids. $YC_2$ is the most stable. There are 5 figures and 3 tables. The most important English-language references are: F. Spedding, K. Schneider, A. Daane, J. Amer. Chem. Soc., 80, 4499 (1958); R. Vickery,



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15.2240
21.2500

AUTHORS: Samsonov, G. V., Kosolapova, T. Ya., Makarenko, G. N.

TITLE: Synthesis and physicochemical properties of yttrium carbides

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 5, 1962, 975 - 979

TEXT: The yttrium carbides YC, $Y_2C_3$ and $YC_2$ were synthesized by heating $Y_2O_3$ with the corresponding stoichiometric amounts of carbon black in vacuo. YC is formed at 1800-1900°C; above 1700°C, the oxycarbide $Y_2C_2O$ is first formed, which is converted into YC by liberation of CO on a further temperature increase (1900°C). YC melts above 1900°C under decomposition. Oxycarbides are also formed in the preparation of $Y_2C_3$ (1700-1800°C), but not in that of $YC_2$ (1900°C). Owing to the high volatility of YC and $Y_2C_3$, the pressure after the reaction remains higher than the initial pressure. $YC_2$, however, has low volatility. Samples were pressed from the carbides to test their physicochemical properties (YC at 1800°C, 80 kg/cm$^2$; $Y_2C_3$ at

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couple with electrolytic copper and calculated with respect to lead was found to be 34.8 $\mu$V/degree. On the basis of this data it follows that YC possesses semiconducting properties. The melting point was equal to 1950 ± 20°C. Yttrium monocarbide rapidly oxidizes in air (in a powdered state), decomposes with water and weak acid and alkali solution; concentrated acids decomposed it slightly. Also it decomposes in air at room temperature at different rates, first rapidly (formation of oxycarbides) reaching a maximum and then gradually decreasing (decomposition of oxycarbides into $Y_2O_3$). After 50 hours of air oxidation, the carbon content falls to 5.1 % and after 75 hours to 2.5 %. There are 5 figures, 3 tables and 8 references: 3 Soviet-bloc and 5 non-Soviet-bloc. The reference to the English-language publication reads as follows: F. Spedding, K. Gschmider, A. Daane, J. Am. Chem. Soc., 80, 4499, 1958.

ASSOCIATION: Otdel tugoplavkikh materialov instituta metallokeramiki i spetsplavov AN USSR (Department of High Melting Materials, Institute of Metal Ceramics, AS USSR)

SUBMITTED: November 5, 1960



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It follows from the above data that combined carbon agrees with the calculated value for the formation of the YC phase and free carbon practically disappears at 1700°C; similarly the yttrium concentration approaches that of YC at 1900°C; at this temperature the sum (yttrium content + total carbon) is more stable and approaches an accuracy of analysis of 97-98 %. Above 1900°C the yttrium carbide melts with a loss of yttrium by evaporation leaving a liquid phase rich in carbon. At temperatures of 1900°C and time of 2.5 - 3 hours a uniform product is formed, golden colored, having a mean combined C content of 12 %, free C, equal practically to zero which agrees with carbide YC (theoretical combined C = 11.89%). The thermal analysis of yttrium carbide distribution for the range from 20 to 1100° by the method of T.S. Verkhoglyadova and L.L. Vereykina (Ref. 7: TsITEIN, M., vyp. 2, 14, 1960) using a protecting atmosphere showed the absence of any transformations; the coefficient of thermal expansion is small and equal to $1.36 \cdot 10^{-1}$ degree$^{-1}$. The specific resistance, determined by a probe method was equal to $4 \cdot 10^{4}$ $\mu\Omega$ cm. Thermoelectric power determined for the



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Preparation and properties ...

Fig. 1. Composition of reduction products against temperature.

Legend: V - concentration (%); G - ratio A/B (see Table 1); D - temperature °C; 1 - coefficient A/B; 2 - yttrium concentration; 3 - combined C; 4 - free carbon; 5 - total C + Y; 6 - calculated concentration of Y; 7 - calculated concentration of carbon.

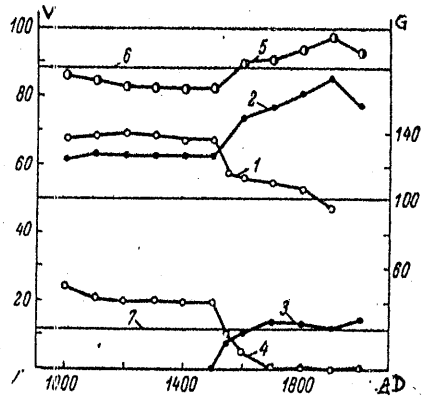


Рис. 1. Зависимость состава продуктов реакции от температуры.

В — содержание (%), Г — отношение A/B (табл.), Д — температура (°C).
1 — коэффициент A/B; 2 — содержание иттрия, 3 — то же связанного углерода, 4 — то же свободного углерода; 5 — сумма содержаний $C_{общ}$ + Y; 6 — расчетное содержание Y, 7 — то же углерода.

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Preparation and properties ...

Table 1. (Cont'd).

ТАБЛИЦА 1

Результаты опытов по приготовлению монокарбида иттрия (шихта стехиометрического состава)

| Температура (°C) | Вес брикета (г) | | Убыль веса (%) | Расчетный вес брикета после нагрева — Б (г) | Отношение А/Б (%) | Время нагрева (час) | Содержание (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | начальный | конечный А | | | | | Y | $C_{общ}$ | $C_{своб}$ | $C_{связ}$ | $C_{общ}$ |
| 1000 | 10.20 | 9.90 | 3.0 | 7.20 | 137 | 2.16 | 62.0 | 24.8 | 24.8 | не обн. | 86.85 |
| 1100 | 10.45 | 10.15 | 2.8 | 8.22 | 124 | 2.00 | 64.1 | 21.3 | 21.2 | не обн. | 85.4 |
| 1200 | 9.90 | 9.82 | 0.8 | 6.99 | 140 | 2.16 | 63.0 | 20.1 | 20.2 | не обн. | 83.1 |
| 1300 | 10.99 | 10.70 | 2.6 | 7.76 | 138 | 2.16 | 63.0 | 20.4 | 20.4 | не обн. | 83.4 |
| 1400 | 7.99 | 7.65 | 4.2 | 5.64 | 135 | 2.33 | 62.9 | 20.4 | 20.6 | не обн. | 83.3 |
| 1500 | 9.78 | 9.30 | 4.9 | 6.90 | 135 | 2.00 | 63.2 | 20.4 | 20.1 | не обн. | 83.6 |
| 1550 | 3.12 | 2.85 | 8.6 | 2.46 | 116 | 2.50 | 64.6 | 18.2 | 10.6 | 8.4 | 82.8 |
| 1600 | 7.55 | 6.04 | 20.0 | 5.33 | 113 | 3.16 | 74.8 | 15.6 | 4.7 | 11.4 | 90.4 |
| 1700 | 9.94 | 7.74 | 22.1 | 7.02 | 110 | 3.16 | 77.4 | 14.1 | не обн. | 14.1 | 91.5 |
| 1800 | 10.22 | 7.65 | 25.1 | 7.21 | 106 | 3.00 | 81.0 | 14.0 | не обн. | 14.0 | 95.0 |
| 1850 | 11.10 | 8.50 | 23.4 | 8.73 | 97.6 | 2.00 | 83.2 | 14.4 | не обн. | 14.4 | 97.6 |
| 1900 | 8.85 | 5.95 | 32.7 | 6.25 | 95.1 | 3.16 | 85.3 | 12.0 | не обн. | 12.0 | 97.3 |
| 2000 | 6.95 | Образец расплавился | | | | 3.16 | 78.0 | 15.5 | 0.31 | 15.3 | 93.3 |

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After explaining the preparation methodology the products of reduction-carbonization were analyzed for yttrium content, total and free carbon. The analysis was difficult, since the products of reduction decomposed in air. The results of analysis are given in Table 1 and Fig. 1.

Table 1. Results of experiments to prepare YC (change of stoichiometric composition).

Legend: 1 - temperature, °C, 2 - wt. of briquettes, 3 - initial, 4 - final, A; 5 - decrease in wt. %; 6 - calculated wt. of briquettes after heating, B (gr.), 7 - ratio A/B, %; 8 - heating time, hours; 9 - composition, %; 10 - total C; 11 - free C; 12 - C combined; 13 - C total; 14 - N.D.; 15 - N.D.; 16 - samples melted; * C combined calculated on carbide phase YC : $C_{comb} = \frac{C_{total} - C_{free}}{100 - C_{free}} \times 100\ \%$.



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15 2240

AUTHORS: Samsonov, G.V., Makarenko, G.N., and Kosolapova, T.Ya.

TITLE: Preparation and properties of yttrium monocarbide

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961, 1444 - 1448

TEXT: Of all yttrium carbides the highest practical interest is in yttrium monocarbide YC, whose properties in contrast to $YC_2$ should be closer to the chemically stable carbides of transition metals of the V period (zirconium, niobium, molybdenum). Literature does not give any data on existence of this carbide, hence the present work deals with the investigation into the possibility and conditions of its preparation and study of some properties. To prepare YC use is made of vacuum reduction of yttrium oxide, with carbon, by the following reaction:

$$Y_2O_3 + 5C = 2YC + 3CO.$$

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of $B_{12}C$ was 4000 kg/mm$^2$ whilst that of $B_4C$ was about 5000 kg/mm$^2$. Electrical resistance measurements showed that there were sharp maxima at 8 and 21.7% carbon. After annealing, the first maximum was retained although the absolute value decreased; a high maximum was observed at about 15% carbon ($B_{13}C_2$). The resistance of alloys containing more than 30% carbon was low and practically independent of composition. Studies of temperature dependence of resistance of $B_4C$ confirmed the semiconducting character of this carbide (see Fig.5). Thermal e.m.f. measurements showed that the highest values corresponded to defect structures of the compounds $B_{12}C$ and $B_{12}C_3$ deficient in carbon. Two possible variations of the phase diagram of the boron-carbon system at the boron-rich end are given in Fig.4. There are 5 figures, 3 tables and 19 references: 14 Soviet and 5 non-Soviet.

SUBMITTED: August 24, 1960



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40% KOH solution at 0.9 to 1.2 A/cm$^2$ and 10 to 20 V. The structures obtained are shown in Fig.1. The alloy with 6.4% carbon had a eutectic structure. At about 8% carbon, the structure was practically single-phased and at 10.2% carbon the whole field appeared as a eutectic. It is proposed that a compound forms at about 8% carbon with the formula $B_{12}C$. A second compound begins to appear at about 10% carbon and is either $B_{13}C_2$ or $B_{12}C_3$. X-ray analysis of the alloys was also carried out and confirmed the metallographic observations. Fig.2 shows the photograph of the phases $B_{12}C$ and $B_4C$. The $B_4C$ phase had a rhombohedral structure. Between 20.9 and 80% C, the alloy consisted of two phases: the rhombohedral phase, with maximum carbon content in the cell, and graphite. At 61% carbon, an X-ray photograph with a large number of lines, the intensity and position of which did not correspond to $B_4C$, was obtained. It is proposed that a compound richer in carbon than $B_4C$ exists at high temperatures, which decomposes to $B_4C$ and graphite at low temperatures. Micro-hardness measurements showed that in the unannealed state there is a maximum corresponding to the proposed phase $B_{12}C$ (about 6000 kg/mm$^2$). After annealing, the hardness curve is smoothed out and the hardness



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15.2200 1273 1142, 1043

S/180/61/000/001/012/015
E021/E406

AUTHORS: Zhuravlev, N.N., Makarenko, G.N., Samsonov, G.V., Sinel'nikova, V.S. and Tsebulya, G.G. (Kiyev)

TITLE: The Question of the Properties and Phase Composition of Alloys of Boron and Carbon

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1961, No.1, pp.133-141

TEXT: The aim of the work was to find a method of preparing relatively pure alloys of boron with carbon and to investigate their physical properties and phase composition. The initial materials were powders of amorphous boron (98.5 to 99.5%) and lamp black (99.8% C). The powders were mixed in alcohol, dried and sieved through 150 mesh. Several methods of preparation were tried, the most acceptable being to hot-press a mixture of the powders in an argon atmosphere in graphite press-formers. Some carburization took place (chemical analyses were made by T.N.Nazarchuk). This could be overcome by using a molybdenum lining but it resulted in contamination with 1.3 to 1.9% molybdenum. Boron nitride linings avoided this contamination. The alloys prepared were examined metallographically, etching by anodic treatment in a

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MAKARENKO, G.K. [Makarenko, H.K.]

The Cherkassy Pionerskaya administrative Region. Sotsyal. [illegible]
no.5:92-105 '62.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKHRACHEV, Aleksandr Yakovlevich[Makhrachov, O.], nauchnyy sotr.;
MAKARENKO, Guriy Karpovich[Makarenko, H.], nauchnyy sotr.;
KHORUZHEVSKIY, Nikolay Dem'yanovich[Khoruzhevs'kyi, M.];
SOLODKIY, D.I.[Solodkyi, D.I.], red.; MOROZKO, L.G.
[Morozko, L.H.], tekhn. red.

[Cities of Kiev Province and their future]Mista Kyivshchyny, ikh maibutnie. Kyiv, Kyivs'ke oblasne knyzhkovo-gazetne vyd-vo, 1962. 121 p. (MIRA 16:4)

1. Institut ekonomiki Akademii nauk Ukr.SSR (for Makharchev, Makarenko). 2. Korespondent "Kiyevskoy pravdy" (for Khoruzhevskiy).
(Kiev Province--Cities and towns)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

KRASNOV, Mikhail Leont'yevich; MAKARENKO, Grigoriy Ivanovich; BAYEV, A.P., red.

[Operational calculus. Stability of motion] Operatsionnoe ischislenie. Ustoichivost' dvizheniia. Moskva, Nauka, 1964. 102 p. (MIRA 17:12)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

KISELEV, A.I.; KRASNOV, M.L.; MAKARENKO, G.I.; KUZNETSOVA, L.G., red.

[Problems in ordinary differential equations] Sbornik zadach po obyknovennym differentsial'nym uravneniiam. Moskva, Vysshaia shkola, 1965. 236 p. (MIRA 18:2)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.I. Cand Phys-Math Sci -- (diss) "Marginal problems for degenerate parabolic equations". Mos, 1957. 10 pp 20 cm. (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst im V. M. Molotov). 100 copies. Bibliography: pp 9-10 (17 names) (KL, 23-57, 108).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.I.

Boundary problems for degenerating parabolic equations. Trudy MEI no.28: 5-24 '56. (MLRA 10:6)

(Differential equations)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

KHZMALYAN, D.M., kand. tekhn. nauk; VILENSKIY, T.V., inzh.; KRASNOV, L.M., kand. fiziko-matem. nauk; MAKARENKO, G.I., kand. fiziko-matem. nauk

Study of the ignition of a single-dimensional coal and dust flow with heat transfer. Teploenergetika 11 no.8:67-70 Ag '64. (MIRA 18:7)

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

KHZMALYAN, D.M., kand. tekhn. nauk; VILENSKIY, T.V., inzh.; KRASNOV, M.L., kand. fiziko-matem. nauk; MAKARENKO, G.I., kand. fiziko-matem. nauk

Combustion process of pulverized coal in a single-dimensional coal dust and air stream. Teploenergetika 11 no.6:85-87 Je '64. (MIRA 18:7)

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.G., inzh.; KRASNOVSKAYA, O.A., inzh.; SURMELI, D.D., kand. tekhn. nauk

Improving the quality of "poroizol" (sealing material). Stroi. mat. 11 no.8:19-21 Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.A.; GRIGOR'YEVA, V.G.; SHEYNINA, T.I., red.;
LUR'YE, B.V., red.

[Recent developments in agricultural research and practice; an annotated bibliography] Novoe v sel'skokhoziaistvennoi nauke i praktike; annotirovannyi ukazatel' literatury. Moskva, Izd-vo "Kolos," 1964. 131 p. (MIRA 18:2)

1. Moscow. TSentral'naya nauchnaya sel'skokhozyaystvennaya biblioteka.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.A.; GRIGOR'YEVA, V.G.; SHEYNINA, T.I., red.; LUR'YE, B.D., red.

[Book to aid the agricultural specialist engaged in production; index of literature for 1963] Knigu - v pomoshch' spetsialistu sel'skogo khoziaistva na proizvodstve; ukazatel' literatury za 1963 god. Moskva, Kolos, 1964. 111 p. (MIRA 18:3)

1. Moscow. TSentral'naya nauchnaya sel'skokhozyaystvennaya biblioteka.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.A.; IL'INSKAYA, V.N.; SHAPIRO, T.I., red.; PECHENKIN, I.V., tekhn. red.

[Recent developments in agricultural research and practice; an annotated bibliography] Novoe v sel'skokhoziaistvennoi nauke i praktike; annotirovannyi ukazatel' literatury. Moskva, Sel'khozizdat, 1962. 103 p. (MIRA 16:7)

1. Moscow. TSentral'naya nauchnaya sel'skokhozyaystvennaya biblioteka.

(Bibliography--Agriculture)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

PAKAREENKO, G.A.; IL'INSKAYA, V.N.; DRUYE, N.N., red.

[Book to aid the agricultural specialist engaged in production; an index of literature for 1961] Kniga - v pomoshch' spetsialistu sel'skogo khoziaistva na proizvodstve; ukazatel' literatury za 1961 god. Moskva, Sel'khozizdat, 1962. 101 p. (MIRA 17:8)

1. Moscow. Tsentral'naya nauchnaya sel'skokhozyaystvennaya biblioteka.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

KAPLAN, A.Ya.; [illegible]

Analysis of a [illegible] of a children's [illegible] examination. Pediatriia 4, no. [illegible] 5:63. (MIRA [illegible])

1. [illegible] Pediatricheskoy [illegible] Leningrad [illegible]

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, G.

Damage caused by larks. Zashch. rast. ot vred. i bol. 10 no.2: 49 '65. (MIRA 18:4)

1. Zaveduyushchiy Yeyskim gosudarstvennym sortouchastkom, Krasnodarskiy kray.

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ACC NR: AP7001900

layers of the Earth's crust are connected. It can be seen that isotherms 25 and 50°, at the boundary of the Siberian plateau lie significantly lower than at the boundaries of the Bay'kal and the Paleozoic base of Western Siberia. Paper presented by Academician A. L. Yanshin 26 July 1966. Orig. art. has: 1 table and 2 figures.

SUB CODE: 08/ SUBM DATE: 13Jul66/ ORIG REF: 009/ OTH REF: 002

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

ACC NR: AP7001900 (N) SOURCE CODE: UR/0020/66/171/004/0944/0947

AUTHOR: Sobolevskaya, V. N.; Makarenko, F. A.; Bogomolov, Yu. G.

ORG: Geology Institute, Academy of Sciences, SSSR (Geologicheskiy institut Akademii nauk SSSR)

TITLE: Use of heat parameters as one of the methods for determining the boundaries in tectonic districting

SOURCE: AN SSSR. Doklady, v. 171, no. 4, 1966, 944-947

TOPIC TAGS: ~~geology~~, physical geology, geologic survey, heat flux pickup, tectonics

ABSTRACT: A large amount of existing data on temperature measurements of the Earth's mantle and base on the territory of the Soviet Union has been, within the last few years, organized and generalized by the Geothermy and Geochemistry Laboratory for Deep Zones, Geology Institute, Academy of Sciences SSSR (Laboratoriya geotermii i gidrodinamiki glubokikh zon Geologicheskogo instituta Akademii nauk SSSR). A laboratory map was drawn which shows the distribution of geothermal fields in the Soviet Union; from the map, some generalizations can be made regarding changes of temperature fields and their relationship to different structures of the Earth's crust. The obtained results showed that changes of the temperature field in the Paleozoic and Bay'kal bases of the Western Siberian plateau and in the Dorfic layer of the Siberian plateau clearly show, in a narrow region, where these different

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A.; CHIKHRADZE, SH.G.

Physical heat flow in the Kolyvan Ridge. Izvi. AN SSSR Ser. Geol. (MIRA 18:2)
907-909 F '65.

1. Submitted September 23, 1964.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

KONONOV, V.I.; MAKARENKO, F.A., doktor geol.-miner. nauk, otv. red.

[Effect of natural and artificial heat focuses on the formation of the chemical composition of underground water] Vliianie estestvennykh i iskusstvennykh ochagov tepla na formirovanie khimicheskogo sostava podzemnykh vod. Moskva, Nauka, 1965. 146 p. (MIRA 19:1)

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KIRSEBOV, Aleksandr Ivanovich; [illegible], F.A., doktor geol.-miner. nauk, otv. red.; NIKOLAYEVA, I.V., red.

[Geothermal conditions and thermal waters in central Ciscaucasia] Geotermicheskie usloviia i termal'nye vody tsentral'nogo Predkavkaz'ia. Moskva, Nauka, 1965. 108 p. (MIRA 19:1)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A., doktor geol.-min. nauk, otv. red.; MAVRITSKIY, B.F., kand. geol.-miner. nauk, otv. red.

[Hydrogeothermal conditions in the upper parts of the earth crust] Gidrogeotermicheskie usloviia verkhnikh chastei zemnoi kory. Moskva, Izd-vo "Nauka," 1964. 162 p. (MIRA 17:8)

1. Akademiya nauk SSSR. Geologicheskiy institut.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A.; MAVRITSKIY, B.F.

Thermal and overheated waters in the U.S.S.R. Sov.geol. 6 no.8:78-94 Ag '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrogeologii i inzhenernoy geologii i Geologicheskiy institut AN SSSR.
(Thermal waters)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

BOGOMOLOV, G.V.; VALEDINSKIY, V.I.; KOCHNEV, S.S.; MANIS, M.N.; PANTELEYEVA, Ye.N.; POPOV, I.V.; SYROVATKIN, V.G.; FOMICHEV, M.M.; BOGORODITSKIY, K.F.; DUKHANINA, V.I.; KRASINTSEVA, V.V.; MAKARENKO, F.A.; POKROVSKIY, V.A.; SILIN-BEKCHURIN, A.I.; FOMIN, V.M.; SHAGOYANTS, S.A.

Il'ia Il'ich Kobozev; obituary. Trudy Lab.gidrogeol.probl. 42:101-102 '62. (MIRA 15:8)

(Kobozev, Il'ia Il'ich, 1908-1961)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A.; CHEPIZHNAYA, E.A.

Study of ore karst. Trudy Lab.gidrogeol.probl. 42:3-9 '62. (MIRA 15:8)

(Karst) (Ore deposits)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A.; AFANAS'YEV, T.P., doktor geol.-min.nauk, otv.red.; TUGARINOV, D.N., red.izd-va; KOVAL'SKAYA, I.F., tekhn.red.

[Characteristics of subsurface flow in the basin of the Don River; regime, balance, hydrochemistry, and geological activity] Kharakteristika gruntovogo stoka basseina Dona; rezhim, balans, gidrokhimiia i geologicheskaia deiatel'nost'. Moskva, Izd-vo Akad.nauk SSSR, 1961 73 p. (Akademiia nauk SSSR. Laboratoriia gidrogeologicheskikh problem. Trudy, vol.34). (MIRA 14:6)
(Don Valley--Water, Underground)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

GARMONOV, I.V.; MAKARENKO, F.A.; OVCHINNIKOV, A.M.

Grigorii Nikolaevich Kamenskii; obituary. Izv.AN SSSR.Ser. geol. 24 no.12:97-98 D '59. (MIRA 13:8)
(Kamenskii, Grigorii Nikolaevich, 1892-1959)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

( SOV/11-59-6-10/15

AUTHORS: Gordeyev, D.I., Afanas'yev, V.P., and Mikhaylov, F.A.

TITLE: In Memory of Nikolay Nikolayevich Slavyanov

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 6, pp 112-115 (USSR)

ABSTRACT: This is an article to the memory of the eminent Soviet hydrogeologist N.N. Slavyanov, Corresponding Member of the AS USSR, who died on October [illegible], [illegible]. He received the degree of Doctor of Sciences without having to defend a thesis on the recommendation of Akademicians V.I. Vernadskiy, V.A. Obruchev and P.I. Stepanov. He was one of the creators of hydrogeochemistry as a science.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A., doktor geologo-mineral.nauk, red.

[Estimation of resources and outlook for the utilization of thermal waters of the U.S.S.R. as a source of heat; with regard to the plan for the development of the national economy of the U.S.S.R.] Otsenka resursov i perspektivy ispol'zovaniia termal'nykh vod SSSR kak istochnika tepla; k perspektivnomu planu razvitiia narodnogo khoziaistva SSSR. Izd.2., dop. s vvedeniem i pod red. F.A.Makarenko. Moskva, 1959. 76 p. (MIRA 13:2)

1. Akademiya nauk SSSR. Laboratoriya gidrogeologicheskikh problem.
(Water, Underground) (Hot-water supply)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

MAKARENKO, F.A.

Some general problems in studying the zonality of underground waters. Trudy Lab.gidrogeol.probl. 16:211-227 '58. (MIRA 12:2)

1. Laboratoriya gidrogeologicheskikh problem imeni F.P. Savarenskogo AN SSSR.

(Water, Underground)

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Kuriles. The Laboratoriya gidrogeologicheskikh problem AN SSSR (Laboratory of Hydrogeological Problems AS USSR) has worked out projects for the utilization of hot water and steam sources for the suburban and regional heating. The Dagestanskiy filial AN SSSR (Dagestan Branch AS USSR) has calculated that 2 to 3 hot water springs will suffice to serve a population of up to 100,000. This will yield an annual economy of 10 million rubles. An intelligent exploitation of such natural resources will save millions of tons of wood, coal and oil fuel and will drastically reduce the load on transportation facilities. There are 2 photos and 2 Soviet references.

ASSOCIATION: Laboratoriya gidrogeologicheskik problem im. F.P. Savarenskogo AN SSSR/Moskva (The Laboratory of Hydrogeological Problems imini F.P. Savarenskiy AS USSR/Moscow).

1. Hydrology 2. Thermal radiation 3. Water--Applications

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strata of huge size. These riches were pointed out by the First All-Union Geothermal Congress in 1956. The hot waters of the Caucasian region at present are best known to researchers. There are successive layers of 100 to 150 and up to 270°C. The largest basins with temperatures up to 150°C and more are in the Stavropol' region, the Terskaya and Kubanskaya tectonic depressions, Dagestan, the Kurinskaya and Rionskaya lowlands, the Ararat valley and the Black Sea coast of the Caucasus. Drilling holes yielded 50 and often up to 100 liters a second. Salts and rare elements (iodine, bromium, boron sulphide, etc.) are available for industrial utilization. In the European part of the USSR there are hot water layers of 70 to 80°C and diverse mineral compounds at depths of 1,500 m and more under the districts of the Second Baku, the Dnepr-Donets sybcline, North-Caspian area, Moscow syneclise, etc. Under the Omsk area in West Siberia, at a depth of up to 2,800 m, large reserves are also available. In the Ufa region, hot subsoil waters reach a temperature of 360°C at a depth of 90 m. There are exceedingly large artesian basins in the Turkmenistan, Uzbekistan, Tadzhikistan under the foot hills of Tyan'-Shan where they border the Kirghiz and Kazakh SSRs. Similar conditions prevail in Central and East Siberia, the Chukotskiy kray, the districts of the Pacific Ocean of the USSR, and the Zabaykal'ye, Kamchatka and the



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SOV-26-58-9-15/42

AUTHOR: Makarenko, F.A., Doctor of Geologo-Mineralogical Sciences

TITLE: Underground Waters as a Source of Thermal Energy (Podzemnyye vody - istochnik teplovoy energii)

PERIODICAL: Priroda, 1958, Nr 9, pp 89-91 (USSR)

ABSTRACT: A vast portion of deep subsoil water is warm or hot; only the overlaying waters are cold. Where the hot water penetrates to the earth surface it is utilized by man in many countries for heating and medicinal purposes. In the USSR it is used for heating of settlements and plant facilities in the vicinity. Soviet geologists, hydro-geologists and geophysicists have discovered lately a gigantic reservoir of horizontal and vertical hot underground waters in the Caucasus, Transcaucasia, Central Asia, the European part of the USSR and several districts of Siberia and Kamchatka. There are indications that hot waters also exist beneath the north and northeast territories of the USSR. Hot springs penetrate the frozen layers of the Chukotskiy krey, the Okhotsk coastal region, several districts of the North Urals and other parts and reach the surface with a temperature of up to 90 to 100°. Hot artesian wells in West Siberia indicate hot-water-bearing

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

SOV-132-58-8-9/16

AUTHORS: Fomin, M., Beder, B.A., Kobozev, I.I., Makarenko, F.A. and Rule, N.A.

TITLE: Development of Exploratory Work on Mineral and Thermal Waters of the USSR (O razvitii issledovatel'skikh rabot na mineral'nyye i termal'nyye vody v SSSR)

PERIODICAL: Razvedka i okhrana nedr, 1958, Nr 9, pp 38-42 (USSR)

ABSTRACT: The importance of mineral and thermal waters for all branches of the national economy is stressed by the authors. Their utilization in the USSR is almost insignificant in comparison with the reserves it possesses. Hydrothermal reserves of the USSR as a source of the thermal energy are practically inexhaustible, as reported during the first All-Union conference on geothermic researches, which took place in Moscow in 1956. At present, research is being conducted by many ministries and organizations, and the authors propose that they be concentrated in the Ministry of Geology and of Conservation of Mineral Resources.

ASSOCIATION: Ministerstvo geologii i okhrany nedr SSSR (The Ministry of Geology and Conservation of Mineral Resources of the USSR)

1. Water--USSR 2. Water--Economic aspects

Card 1/1

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001031400012-6

AUTHOR: Makarenko, F.A. SOV-5-58-2-37/43

TITLE: Hot Subsurface Waters, Their Occurrence and Prospects for Practical Utilization (Goryachiye podzemnyye vody, ikh rasprostraneniye i perspektivy prakticheskogo ispol'zovaniya)

PERIODICAL: Byulleten' Moskovskogo obshchestva ispytateley prirody - Otdel geologicheskiy, 1958, Nr 2, pp 157-158 (USSR)

ABSTRACT: In this article, the author gives general data on thermal waters in the USSR, occurring in the Caucasus, the Trans-Caucasus, Central Asia, Siberia, Kamchatka and the European part of the USSR.

1. Hydrology--USSR 2. Water--Temperature factors

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11-12-7/10

Contemporary State and Fundamental Problems of Soviet Hydrogeology

the USSR Academy of Sciences (Institut geokhemii i analiticheskoy khimii AN SSSR), the Laboratory of Hydrogeological Problems and the Institute for Physics of the Earth of the USSR Academy of Sciences (Laboratoriya gidrogeologicheskikh problem i institut fiziki zemli AN SSSR). Thermal, high-thermal and superheated waters located in deep Mesozoic strata occur within the area of the large west Siberian artesian basin over an expanse of more than 2 million sq km. The use of these waters for thermification has started. Based on present data, it has been estimated that more than 60 cities of the USSR, including rural districts, can be centrally heated by thermal waters.

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11-12-7/10

Contemporary State and Fundamental Problems of Soviet Hydrogeology

Natural Resources (Ministerstvo geologii in okhrany nedr). Small scale maps on subsurface water and deep underground water resources were prepared by I.K. Zaytsev and V.I. Dukhanin. To study the interaction between water and mountain rocks, studies of reactions under field conditions and in laboratories were conducted. For several years G.N. Kamenskiy worked successfully on problems pertaining to the flow, storage, and supply of subsurface water resources. In the entire area of the Russian plateau, in some areas in Central Asia and in some regions of the European part of the USSR the flows of subsurface waters were investigated. Studies of the origin and location of mineral waters were taken up by N.N. Slavyanov, I.I. Volodkevich and other geologists. It was found that the methods used successfully by hydrogeologists and hydrochemists at the prospecting for oil, gas and metals could also be applied at hydrogeochemical and hydrogeological research.. Various hydrochemical methods perfected by A.A. Brodskiy, A.I. Germanov, A.V. Shcherbakov and others are now widely used for prospecting oil and ore deposits. Studies for the use of thermal waters for heating purposes were initiated by the Institute of Geochemistry and Analytical Chemistry of

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lems of hydrochemistry and geochemistry of subsurface waters. 11. Hydrogeochemical and hydrogeological criterions and methods of prospecting for minerals. 12. Problems of radiohydrogeology. As to the genesis of subsurface waters, modern hydrogeology arived to the conclusion that underground water resources originate mainly from filtration, partly from processes of condensation, from ancient seas, lagoons and other deposits submerged together with rock formations of basins, and several other processes. Detailed studies are presently conducted in different regions of the USSR on geological, zonal, geochemical, biogeochemical, geothermal, and hydrodynamic conditions as well as the regularity of formation and distribution of water resources. The publication of V.I. Vernadskiy in 1936 laid the foundation for systematic studies of subsurface water resources of the USSR. At this time, extensive geologic-geochemical research was conducted by A.D. Arkhangel'skiy, E.S. Zalmanzon and other scientists. Deep drilling operations provided extensive data for the preparation of hydrogeological maps, which were issued at a scale of 1;500,000 by the Ministry of Geology and Conservation of



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Contemporary State and Fundamental Problems of Soviet Hydrogeology

Kamenskiy and others are prominent among numerous groups of Soviet geologists engaged in hydrogeologic research. Hydrogeology, being the only science dealing with subsurface water resources, and, in accordance with specialization taken place in geology and geography, is subdivided into several branches, such as mining and mineral hydrogeology, hydrogeology of waters associated with crude oil, radiohydrogeology, hydrogeothermics, hydrogeology of mineral waters and hydro-geochemistry. As a consequence, numerous scientific problems arise, which can be classified as follows: 1. Origin and formation of subsurface waters. 2. General theory and dynamics of subsurface waters. 3. Subsurface flow and connections of subsurface waters with surface waters. 4. Zones and geologic rules of the distribution of subsurface water resources. 5. Equilibrium, reserves and conservation of subsurface water resources. 6. Mineral waters, mineralized waters and brines. 7. Thermal waters, their role in the thermic equilibrium of the earth's crust and their utilization for thermification and power engineering. 8. Correlation of waters with mountain rocks. 9. Hydrodynamical and hydrochemical basis for the study of the system of subsurface waters. 10. General prob-

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Makarenko, F.A.

AUTHOR: Makarenko, F.A. 11-12-7/10

TITLE: Contemporary State and Fundamental Problems of Soviet Hydrogeology (Sovremennoye sostoyaniye i osnovnyye problemy sovetskoy gidrogeologii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1957, # 12, pp 97-108 (USSR)

ABSTRACT: A wide network of special scientific institutes which are engaged in various research in the field of hydrogeology and engineering geology spans the USSR. Increased emphasis is laid on specialized geologic research, such as geological geochemistry, ore mineralogy, geomorphology, soil geobotany, volcanology and finally hydrogeology, linked up anew with these sciences, the methods of which essentially aided the studies of water resources. The tremendous importance of subsurface waters was first stressed by V.I. Vernadskiy, A.F. Fersman, A.D. Arkhangel'skiy, B.B. Polynov, A.P. Vinogradov, N.M. Strakhov and others. The rules of formation of subsurface water resources, their economic importance and their conservation became one of the primary objectives of present hydrologic institutes. The academicians F.P. Savarenskiy, V.I. Vernadskiy, member-correspondent N.N. Slavyanova, G.N.

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MAKARENKO, F.A.

Popov, I.V

3(4,5) PHASE I BOOK EXPLOITATION SOV/1655

Akademiya nauk SSSR. Komitet po geodezii i geofizike.

Tezisy dokladov na XI General'noy assembleye Mezhdunarodnogo geodezicheskogo i geofizicheskogo soyuza. Mezhdunarodnaya assotsiatsiya nauchnoy gidrologii (Abstracts of Reports Submitted to the 11th General Assembly of the International Union of Geodesy and Geophysics. The International Association of Scientific Hydrology) Moscow, 1957. 101 p. /Parallel texts in Russian and English or French/ 1,500 copies printed.

No additional contributors mentioned

PURPOSE: This booklet is intended for hydrologists and civil engineers.

COVERAGE: This collection of abstracts covers reports presented at the 11th General Assembly of the International Union of Geodesy and Geophysics on hydrological, erosional, and glaciological processes. Studies related to problems of underground waters, snow, and rivers are also discussed. The abstracts are in Russian, with English or French translations. Those appearing in English are designated by a single asterisk; those in French by two. There are no references given.

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Shul'ts, V.L. Basic Characteristics of the Regimen of Rivers of Central Asia in Connection With Problems of Their Utilization * 40

Bogomolov, G.V., and N.A. Plotnikov. Classification of Underground Waters and Their Representation on Maps ** 45

Makarenko, F.A. Characteristics of the Formation of Underground Runoff into Open Reservoirs and Rivers and Methods of Determining Them * 48

Kmain, V.N. Conditions of Underground Water Accumulation in Deserts * 52

Tagarinov, V.V. The Study of the Process of Atmospheric Water Vapor Condensation and Its Role in the Formation of Underground Waters * 57

Kudelin, V.I. Principles of Regional Evaluation of Natural Reserves of Underground Waters and the Problems of Water Balance * 60

Ovchinnikov, A.M. Hydrogeological Maps of Folded Mountain Regions and Their Significance in the Evaluation of Underground Water Reserves * 64

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MAKARENKO, F.A., doktor geologo-mineralogicheskikh nauk; KHITAROV, N.I., kandidat geologo-mineralogicheskikh nauk

Geothermy of the Greater and Lesser Caucasus; conference in Tiflis. Vest. AN SSSR 25 no.9:102-103 S'55. (MIRA 8:12)
(Caucasus--Geology)

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1. MAKARENKO. F. A.

2. USSR (600)

4. Kazakhstan--Water, Undergroud

7. Ground waters of short valleys such a s those of central Kazakhstan and the northern Balkhas region. Trudy Lab. gidrogeol. probl./6'51.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

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1. MAKARENKO, F. A.

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4. Pyatigorsk-Travertine

7. Hydrogeological analysis of the travertines of Pyatigorsk. Trudy Lab.gidrogeol.probl. 10, 1951.

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

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MAKARENKO F. A., PA 172T32

USSR/Geophysics - Hydrology 11 Oct 50
Ground Water

"Determination of the Modulus and Mapping of Ground-Water Resources," F. A. Makarenko, Lab of Hydrogeol Problems imeni F. P. Savarenskiy, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIV, No 5, pp 1007-1010

Contends method of expressing natural ground-water resources, in contrast to ground-water stores (total vol in seam or level), in moduli of subsurface runoff (discharge in l/sec of ground water from area of 1 sq km) is only method permitting accurate mapping. Present method is inaccurate. Submitted by Acad D. S. Belyankin 12 Aug 50.

[redacted] 172T32

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1. MAKARENKO, F. A.

2. USSR (600)

4. Water, Underground

7. Circle-diagram graph for processing hudrogeological data. Trudy Lab. gidrogeol. probl 6, 1949.

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MAKARENKO, F.A.

The genesis of the hydrogen sulfide waters of Matsesta. Trudy Lab. Gidrogeol. Problem im. F.P. Savarenskogo, Akad. Nauk S.S.S.R. 2, 3-45 '49. (MLRA 5:9)
(CA 47 no.15:7701 '53)

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